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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHANKONG, DOHM	
ART UNIT	**PAPER NUMBER**
2152	

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/680,559	HIPP ET AL.	
	Examiner	Art Unit	
	Dohm Chankong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1> This action is in response to Applicant's amendment and remarks. Claims 1-24 have been cancelled. Claims 25-45 have been added.

2> This is a final rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3> Claims 38 and 44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

a. Claims 38 and 44 refer to associating a virtual address with a loopback address. It is unclear what is meant by loopback address as there seems to be no disclosure of this functionality within the specification. The spec mentions associating IP addresses with a loopback interface but does not specifically refer to associating the addresses with a loopback address.

If Applicant feels this rejection is in error, Examiner respectfully requests specific citations of the specification that support the claimed functionality.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4> Claims 25-35, 39-41 and 45 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache et al, U.S Patent No. 6.243.825, in view of Aiken, Jr. et al, U.S Patent No. 6.430.622 ["Aiken"].

5> As to claim 25, Gamache discloses a method comprising:

initiating a first process separate from a first application that comprises one or more second processes [column 2 «lines 14-32» | column 7 «lines 4-27» | column 10 «lines 18-29» where : Gamache's resource monitor process corresponds to a first process];

assigning a unique Internet Protocol (IP) address and virtual hostname to the first application [column 11 «line 46» to column 12 «line 8»];

the first process registering the IP address and the virtual hostname with a software module interposed between the first application and an operating system [Figure 8 | column 6 «lines 33-40» | column 12 «lines 9-36»];

the first process initiating at least one of the more second processes of the first application [column 10 «lines 18-29» | column 11 «lines 1-6»]; and

the at least one second process inheriting the IP address and the virtual hostname from the first process [column 11 «lines 56-62» | column 12 «lines 13-36» where : Gamache's resource monitor directs the virtual name and IP address pairs of the application].

Gamache does not explicitly disclose that the IP address is a virtual IP address.

6> In the same field of invention, Aiken is directed towards application state migration in a clustered networking environment [abstract]. Aiken also discloses transferring virtual IP addresses between application processes [column 4 «lines 2-33»]. It would have been obvious to one of ordinary skill in the art to modify Gamache's IP address to be a virtual IP address as taught by Aiken. One would have been particularly motivated to provide such an implementation in Gamache as virtual IP addresses allow the address to be dynamically associated instead of statically associated [see Aiken, column 1 «lines 37-58»] which would enable the addresses to be transferred along with the virtual name in Gamache's system.

7> As to claim 26, Gamache discloses the method of claim 25, further comprising the first process using a first application identifier in the registering, and the inheriting comprising the first application identifier from the first process [column 10 «lines 18-29» | column 12 «lines 9-14» where : the resource monitor registers a "computer identity" of the application, the identity comprising a name and IP address pair].

8> As to claim 27, Gamache discloses the method of claim 25, further comprising:

the first application issuing a hostname request [column 11 «lines 35-38»]; and

the software module responding to the hostname request with the virtual hostname [column 11 «lines 35-50» | column 12 «lines 9-51»].

9> As to claim 28, Gamache discloses the method of claim 25, further comprising resolving the virtual hostname to an IP address [column 12 «lines 20-31» : "name to address mapping"].

Gamache does not explicitly disclose that the IP address is a virtual IP address.

10> In the same field of invention, Aiken is directed towards application state migration in a clustered networking environment [abstract]. Aiken also discloses transferring virtual IP addresses between application processes [column 4 «lines 2-33»]. It would have been obvious to one of ordinary skill in the art to modify Gamache's IP address to be a virtual IP address as taught by Aiken. One would have been particularly motivated to provide such an implementation in Gamache as virtual IP addresses allow the address to be dynamically associated instead of statically associated [see Aiken, column 1 «lines 37-58»] which would enable the addresses to be transferred along with the virtual name in Gamache's system.

11> As to claim 29, Gamache discloses the method of claim 28, further comprising using the IP address as a local address [column 11 «line 66» to column 12 «line 3» | column 12 «lines

9-11» where : the IP address is used by the application at the machine to which it is being migrated].

Gamache does not explicitly disclose that the IP address is a virtual IP address.

12› In the same field of invention, Aiken is directed towards application state migration in a clustered networking environment [abstract]. Aiken also discloses transferring virtual IP addresses between application processes [column 4 «lines 2-33»]. It would have been obvious to one of ordinary skill in the art to modify Gamache's IP address to be a virtual IP address as taught by Aiken. One would have been particularly motivated to provide such an implementation in Gamache as virtual IP addresses allow the address to be dynamically associated instead of statically associated [see Aiken, column 1 «lines 37-58»] which would enable the addresses to be transferred along with the virtual name in Gamache's system.

13› As to claim 30, Gamache discloses the method of claim 28, further comprising configuring one or more address resolution mechanisms to resolve the virtual hostname to the IP address [column 12 «lines 9-51»].

14› As to claim 31, Gamache does not disclose performing the resolving in response to a request from a second application.

15› Aiken discloses performing the resolving in response to a request from a second application [column 10 «lines 41-53» | column 12 «lines 21-31»]. It would have been obvious to

one of ordinary skill in the art to modify Gamache's system to include a second application enabling better recovery and movement of IP addresses within a cluster [see Aiken, column 3 «lines 19-21 and 56-67»].

16> As to claim 32, Gamache discloses the method of claim 31, wherein the one or more address resolution mechanisms comprises a domain name service [column 12 «lines 31-36»].

17> As to claim 33, Gamache discloses the method of claim 30, wherein the one or more address resolution mechanisms comprise a file maintained by the operating system [Figure 4 | column 6 «lines 16-26»].

18> As to claim 34, Gamache discloses the method of claim 25, wherein the assigning is dynamic [column 11 «lines 38-50» where : if the environment variable is not present, than they are dynamically given the name of a machine].

19> As to claim 35, Gamache discloses the method of claim 25, wherein the assigning is static [column 11 «lines 38-50» where : if the variable is present (static), then it is simply assigned the name specified by the variable].

20> As to claims 39-41 and 45 as they do not distinguish or further define over the limitations of claims 25-27 respectively, they are rejected for reasons set forth for claims 25-27, supra.

21> Claims 36 and 42 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache and Aiken, in further view of Yu et al, U.S Patent No. 5.734.865 ["Yu"].

22> As to claims 36 and 42, Gamache and Aiken do not disclose a virtual interface having the virtual IP address and virtual hostname.

23> In a similar field of invention, Yu discloses a virtual interface having the virtual IP address and virtual hostname [Figure 5 «"if_name", "virtual host IP address"» | Figure 7c | column 10 «lines 15-16» | column 12 «line 47» to column 13 «line 39»]. It would have been obvious to one of ordinary skill in the art to incorporate Yu's virtual interface into Gamache's system. One would have been motivated to provide the virtual interface implementation into Gamache as virtual interfaces provide a means for applications to be shared across a wider variety of networking protocols [see Yu, column 3 «lines 46-56»]. Therefore Yu's virtual interface would enable Gamache's applications to be utilized over different protocols.

24> Claims 37 and 43 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache, Aiken and Yu, in further view of Primak et al, U.S Patent No. 6.389.448 ["Primak"].

25> As to claims 37 and 43, Gamache and Aiken do not explicitly disclose associating the virtual IP address with a physical IP address of a computer on which the first application is executing.

However, it should be noted that it is well known in the art that virtual IP addresses are mapped to a physical IP address. Without this association, virtual IP addresses would be useless to a network if it did not direct a user to a physical real address. For example, Primak discloses how ARP maps virtual IP address to real IP address [column 6 «lines 6-19»]. As Gamache also discloses binding the IP address to a computer device [column 12 «lines 20-25»], it would have been obvious to one of ordinary skill in the art to have reasonably inferred that Gamache and Aiken's virtual IP addresses would be associated with a physical address of the machine on which an application is located.

26> Claims 38 and 44 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache, Aiken and Yu, in further view of Applicant's admitted prior art ["AAPA"].

27> As to claims 38 and 44, Gamache and Aiken do not explicitly disclose associating the virtual IP address with a loopback address.

28> According to AAPA, associating IP addresses with loopback network interfaces is "provided by some standard operating systems and allows the host to use one or more IP addresses as the local address for a single network interface" [see Applicant's specification, page 19 «lines 21-22»]. Yu discloses that network interfaces are associated with addresses of a

computer on which applications are executed [Figure 5 «"common local host IP address"» | column 12 «line 47» to column 13 «line 39»]. Therefore it would have been obvious to one of ordinary skill in the art to modify Gamache to associate IP addresses with loopback network interfaces (which is constructed of the "common local host IP address") as this is a common functionality provided by standard operating systems and enables hosts to use a plurality of IP address as a local address for the interface.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is (571)272-3942. The examiner can normally be reached on 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DC

Dung C. Dinh
Primary Examiner